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REMARKS

By this amendment, claims 1-10, 12-22, 24, 25, and 33-45 are pending in the application. Of these, claims 3-4, 6, 10, 12-13, 15-16, 21, 33, 38-39, 41, and 44 are being amended. Claims 1, 2, 5, 7-9, and 17-20 have been allowed. Reconsideration of the present case is respectfully requested.

It is believed that the claim amendments are supported by the Specification, claims, and Drawings as originally filed. Thus, no new matter is added, and entry of the amendments is respectfully requested.

Claims 3-4, 6, 10, 12-13, 15-16, 21, 33, 38-39, 41 are being amended to remove the word 'substantially.'

Claim 44 is being amended to cite "applying an RF signal to the cathode to produce electric fields within the chamber that interact with the gas to form a plasma in the chamber". This is supported by the first paragraph of the 'Description of the Background Art' section of U.S. Patent Application Number 08/767,071, which was incorporated by reference on page 4, line 35 of the specification of the present application. Sentences 4-7 of this paragraph discuss driving a cathode with an RF signal to produce electric fields in the chamber to form a plasma.

Rejection Under 35 U.S.C. 112, Second Paragraph, of Claims 3-4, 6, 10, 12-13, 15-16, 21, 33, 38-39, and 41

The Examiner rejected claims 3-4, 6, 10, 12-13, 15-16, 21, 33, 38-39, and 41 under 35 U.S.C. 112 as being indefinite for using the term 'substantially.'

Claims 3, 12, 33, 34, and 39

Claims 3, 12, 33, 34, and 39 have been amended to remove the term 'substantially' as a modifier for the term 'non-vertical' when referencing the antenna.

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Removal of the term 'substantially' from these claims broadens the scope of these claims from a subset of non-vertical antennas to the entire set of non-vertical antennas. The non-vertical antenna in these claims encompasses all antennas that are not vertical, i.e. all antennas that are horizontal or inclined, for example as illustrated in Figure 1 of the Drawings, but not at 90° relative to the substrate.

Claims 4, 6, 13, and 15

Claims 4, 6, 13, and 15 have been amended to remove the term 'substantially' as a modifier for the term 'permeable' in the context of the permeability of the ceiling to RF energy, as in claims 4 and 13, or the window to X-rays or an optical beam, as in claims 6 and 15. If a ceiling or window is permeable to X-rays, optical beams, or RF energy, it simply means the radiation passes through the ceiling or window with some level of transmissivity. The term 'substantially' did not meaningfully modify 'permeable' in these claims and thus its removal brings clarity to the claim language without narrowing it.

Claims 10, 16, and 21

Claims 10, 16, and 21 have been amended to remove the term 'substantially' as a modifier of 'facing' in the context of a ceiling facing the substrate. The Applicant believes that the use of the term 'facing' instead of 'substantially facing' is a cosmetic improvement of the claim language. The claim language, as amended, is believed to include walls opposing the substrate, as shown in Figure 1 of the Drawings. The claim language excludes walls that are not even at least partially facing the substrate, for example walls that are vertical to the plane of the substrate, i.e. walls that are at a 90° angle to the substrate.

Claim 38

Claim 38 has been amended to remove the term 'substantial' from the phrase "substantial portion of the external top surface." The claim has been amended to cite 'at least a portion of the external top surface,' which is broader than a "substantial portion of the external top surface."

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Claim 41

Claim 41 has been amended to remove the term 'substantially' as a modifier of 'flat wall.'

Rejection Under 35 U.S.C 102(e) of Claims 44-45

The Examiner rejected claims 44-45 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,846,883 to Moslehi. This rejection is respectfully traversed.

Claim 44 is not anticipated by Moslehi because Moslehi does not teach "applying an RF signal to the cathode by powering the RF power source to produce electric fields within the chamber that interact with the gas to form a plasma in the chamber" as recited in the claim. Instead, Moslehi teaches providing power to an inductive coil embedded within a chamber wall to inductively couple RF energy into a plasma in a chamber. Moslehi does not teach applying an RF signal to a cathode within the chamber to produce electric fields into the gas within the chamber. Furthermore, the inductively-coupled plasma method of Moslehi "reduces the risk of capacitive coupling" (column 1, line 44). Providing power to a coil to inductively couple magnetic fields into a chamber is different than applying an RF signal to a cathode to produce electric fields in a chamber. Thus, claim 44, and claim 45 which is dependent therefrom, are not anticipated by Moslehi.

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CONCLUSION

The above-discussed amendments are believed to place the present application in condition for allowance. Should the Examiner have any questions regarding the above remarks, the Examiner is requested to telephone Applicant's representative at the number listed below.

Respectfully submitted,

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A PROFESSIONAL CORPORATION

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